

U.S. Serial No. 09/888,920

Amendment to Office Action dated June 29, 2005

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

1-26 (Canceled)

27. (Currently Amended) An integral catheter tube hub comprising:

a proximal portion configured as a connector;

a distal portion configured as a strain relief; and

a lumen defined by a continuous lumen wall extending from a distal end of the hub to a proximal end of the hub, the lumen having a length extending through the proximal and distal portions; the lumen having a substantially fixed diameter along its length, the lumen being configured to receive and retain an end of a catheter tube; the proximal and distal portions of the hub being formed of only one or two layers of material surrounding the lumen;

wherein the lumen wall in the strain relief portion includes a generally helical wall defining the lumen, the helical wall having a plurality of bends separated by spaces, wherein the spaces extend into the lumen.

28. (Previously Presented) The hub of claim 27, wherein the average thickness of the proximal portion is thicker than the average thickness of the distal portion.

29. (Previously Presented) The hub of claim 27, wherein the thickness of the helical wall generally decreases distally.

30. (Withdrawn) The hub of claim 27, wherein a plurality of grooves extend into the passage wall generally transversely toward the passage.

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31. (Withdrawn) The hub of claim 27, wherein the width of the grooves increases distally.

32. (Withdrawn) The hub of claim 27, wherein the thickness between the grooves decreases distally.

33. (Withdrawn) The hub of claim 27, wherein the grooves extend through the wall into the passage.

34. (Withdrawn) The hub of claim 30, wherein the grooves are disposed in a plurality of sets, each set including two grooves, the two grooves within each set being disposed generally within the same plane to define a transverse hinge in the strain relief.

35. (Previously Presented) The hub of claim 29, wherein the helical wall extends from proximate a proximal end of the distal portion to proximate a distal end of the distal portion.

36. (Previously Presented) The hub of claim 27, wherein the connector is a threaded connector.

37. (Previously Presented) The hub of claim 27, wherein the hub includes transversely extending wings.

38. (Previously Presented) The hub of claim 27, wherein the hub is made of nylon.

39. (Previously Presented) The hub of claim 27, wherein the hub is made of polyether block amide polymer (PEBA).

40. (Withdrawn) The hub of claim 27, wherein a lumen extends at an angle from the proximal portion of the hub and connects with the lumen therein.

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41. (Currently Amended) A unitary catheter tube hub comprising:  
a connector;  
a strain relief integrally formed with the connector; and  
a lumen having a substantially fixed ~~and uniform~~ diameter extending through the connector and strain relief; the lumen configured to receive a catheter tube;  
wherein the strain relief includes a generally helical wall defining the lumen, the helical wall having a plurality of bends separated by spaces that extend into the lumen, wherein the helical wall of the strain relief transitions into a lumen wall of the connector; wherein a single layer of material forms the lumen wall in the connector and strain relief.

42. (Previously Presented) The catheter tube hub of claim 41, wherein the strain relief has distal and proximal ends, wherein the helical wall extends at least partially between the distal and proximal ends.

43. (Previously Presented) The catheter tube hub of claim 41, wherein the lumen is configured to slidably receive a catheter tube.

44. (Previously Presented) The catheter tube hub of claim 42, wherein the helical wall has a thickness that generally decreases toward the distal end.

45. (Previously Presented) The catheter tube hub of claim 42, wherein the strain relief has a height that generally decreases toward the distal end.

46. (Previously Presented) The catheter tube hub of claim 27, wherein the connector is externally threaded.

47. (New) The catheter tube hub of claim 41, further comprising a catheter tube positioned within the lumen extending from a distal end of the strain relief into at

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least a portion of the connector such that the combination of the catheter tube and hub forms a two-layer lumen wall in the strain relief and at least a portion of the connector.

48. (New) An integrally molded catheter tube hub comprising:

a connector;

a hub extending distally from the connector;

a strain relief extending distally from the hub; and

a lumen defined by a lumen wall extending from a distal end of the strain relief through the hub to a proximal end of the connector, the lumen having a substantially fixed diameter;

wherein the lumen wall in the strain relief portion includes a generally helical wall defining the lumen, the helical wall having a plurality of bends separated by spaces, wherein the spaces extend into the lumen, and the lumen wall in the hub and connector is continuous; wherein the lumen wall is formed of a single layer in the connector and in at least a portion of the hub, and the lumen wall is formed of at most two layers in the strain relief.